## **APPLICATION**

### **FOR**

# UNITED STATES LETTERS PATENT

Binding method

TITLE:

PARATHROID HORMONE RECEPTOR AND DNA ENCODING

SAME

**APPLICANT:** 

GINO V. SEGRE, HENRY M. KRONENBERG, ABDUL-BADI

ABOU-SAMRA, HARALD JUPPNER, JOHN T. POTTS, JR.

AND ERNESTINA SCHIPANI

"EXPRESS MAIL" Mailing Label Number <u>EL010098548US</u>

Date of Deposit November 24, 1998

I hereby certify under 37 CFR 1.10 that this correspondence is being deposited with the United States Postal Service as "Express Mail Post Office To Addressee" with sufficient postage on the date indicated above and is addressed to the Assistant Commissioner for

Patents, Washington, D.C. 20231.

Anne Ry

Pule Miles Miles

ATTORNEY DOCKET NO: 00786/071001

BINDING METHOD

PARATHYROID HORMONE RECEPTOR AND DAR EMCODING SAME

dusq1)

### Background of the Invention

Partial funding of the work described herein was provided by the U.S. Government, which has certain rights to the invention.

The invention relates to endocrine receptors.

10

25

30

A crucial step in the expression of hormonal action is the interaction of hormones with receptors on the plasma membrane surface of target cells. The formation of hormonereceptor complexes allows the transduction of extracellular signals into the cell to elicit a variety of biological responses. For example, binding of a hormone such as follicle stimulating hormone (FSH), luteinizing hormone (LH), thyroid stimulating hormone (TSH), and chorionic gonadotropin (CG), to its cell surface receptor induces a conformational change in the receptor, resulting in the association of the receptor with a transductor molecule, the stimulatory guanine nucleotide (GTP) binding protein, a component of which is  $(G_s)$ . This association stimulates adenylate cyclase activity which in turn triggers other cellular processes such as protein phosphorylation, steroid synthesis and secretion, and the modulation of ion flux. Binding of other hormones, including arginine vasopressin (VP), angiotensin II, and norepinephrine, to their cell surface receptors results in the activation of other types of GTP binding proteins components such as  $(G_p)$ , which in turn stimulates the activity of the enzyme phospholipase C. The products of phospholipase C hydrolysis initiate a complex cascade of cellular events, including the

NOP BULLING LICELOY

ATTORNEY DOCKET NO. 00786/071005

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Capplicant : Gino V. Segre et al. Serial No.:

Art Unit: Examiner:

√Filed

HEREWITH

⊂ Title

PARATHROID HORMONE RECEPTOR AND DNA ENCODING SAME

Assistant Commissioner for Patents

Washington, DC 20231

#### PRELIMINARY AMENDMENT

Prior to examination, please amend the application as

follows:

In the Specification:

Insert the following on page 1, before the first now U.S. Portent 5,840,853, -This application is a divisional of U.S. Application Serial No. 08/471,494, filed June 6, 1995, and U.S. Application Serial No. 08/468,249, filed June 6, 1995, both of which are divisionals of U.S. Application Serial No. 07/864,475, which which which which of U.S. Application Serial No. 07/681,702, filed April 5, 1991, and now abandoned. --

### In the Claims:

Cancel claims 2-5, 9, 13-19, 22 and 26-38.

"EXPRESS MAIL" Mailing Label Number \_FL010098548IIS\_

November 24, 1998 Date of Deposit \_\_\_ I hereby certify under 37 CFR 1.10 that this correspondence is being deposited with the United States Postal Service as "Express Mail Post Office To Addressee" with sufficient postage on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

1